

IN THE CLAIMS

A complete listing of the claims follows and replaces any prior versions.

1 1-10. (Canceled)

1 11. (Currently Amended) A data storage system, comprising:

2 a host computer system;

3 a first set of storage volumes;

4 a second set of storage volumes for backing-up data from the first set of storage

5 volumes; and

6 a controller for controlling the transfer of data from the host system to the first and

7 second set of storage volumes, wherein at least the first set of storage volumes further

8 comprises data recording media including a plurality of extended format sectors, the

9 extended format sectors comprising a user data sector field for storing user data and a backup

10 indicator field for indicating the status of the user data sector field;

11 wherein the backup indicator field indicates whether the user data in the user data

12 sector field has been written to backup storage subsequent to a previous backup operation

13 and wherein the first set of storage volumes is arranged as a virtual space wherein the host

14 views the configuration as being a storage device having a first predetermined size and the

15 controller allocates storage space from the first set of storage volumes having a physically

16 smaller size than viewed by the host.

1 12. (Canceled)

1 13. (Original) The data storage system of claim 11 wherein the backup
2 indicator comprises a single bit.

1 14. (Original) The data storage system of claim 11 wherein the backup
2 indicator comprises an indicator of whether the user data in the user data sector field has been
3 written to backup storage subsequent to a previous backup operation and data indicating the
4 age of the user data in the user data sector field.

1 15. (Original) The data storage system of claim 11 wherein the backup
2 indicator indicates whether the user data sector field has been written to.

1 16. (Canceled)

1 17. (Currently Amended) The data storage system of claim [[16]] 11 wherein the
2 controller periodically determines which sectors have been written using the backup indicator
3 to predict when the host will need additional physical space.

1 18. (Currently Amended) The data storage system of claim [[16]] 11 wherein the
2 controller allocates additional storage space on the first set of storage volumes before the host
3 requires additional storage space to minimize delays to the host.

1 19. (Original) The data storage system of claim 18 wherein the controller
2 reads the backup indicator to determine when a usage threshold have been exceeded.

1 20-22. (Canceled)